

APPENDIX D DEVELOPER NOTES

D.1 DESKTOP RESOURCES

This section lists the resource settings to implement the default DII configuration defined in section 7 of this style guide. Unless otherwise indicated, the default settings defined in the TED version of CDE are used.

Application Manager. Removing access to the Command Line Login feature in CDE limits users to launching only one instance of an application.

File Manager. The `Dtfile*restrictMode` resource is set to True. This setting prevents users from accessing the Open Terminal option of the File menu in the Application and File Manager and from navigating above their own home directory. With regard to the latter, users desiring to share files will have to send them (e.g., by e-mail) to other users since they will be unable to see outside their own home directory.

D.2 COLOR SETS

Classification banner. The classification bar contains black text and uses the following colors to indicate security level:

Unclassified	Green	ForestGreen	34 139 34
Confidential	Blue	SkyBlue	135 206 235
Secret	Red	Firebrick2	238 44 44
Top Secret	Orange	DarkOrange	255 140 0

Color palettes. The following display elements are associated with the color set IDs used by CDE in the More Colors for Desktop (i.e., high color) setting in Style Manager:

Color Set ID	Display Element
1	Active window frame color, location cursor color, select color for toggle buttons
2	Inactive window frame color
3	Background color for workspace #1*
4	Background color for text entry areas and lists
5	Background color for application's main window areas, background color for workspace #2*
6	Background color for application's menu bar, menus, and dialog boxes, background color for workspace #3*
7	Background color for workspace #4*
8	Background for Front Panel and graphic in window icon

* This color is used when the Backdrop is set to "background."

Note: TED does not currently provide a common window background color across high, medium, and low color settings. This problem has been identified to TriTeal and will be corrected so that the software is consistent with the TED documentation.

Table D-1 lists the color name (where defined) and RGB value for each color set ID in the color palettes to be used in the DII configuration of CDE. The top set of colors in the table were selected from

those included with CDE while the bottom set were created specifically for DII systems. The default color palette for DII systems is Gray75.

The letter in parentheses following the name of each palette indicates the foreground color (either (W)hite or (B)lack) used by CDE in the application's main window areas (i.e., color set ID 5). The contrast between foreground and background in these areas was computed using the equation provided in the DoD style guide and found to exceed the minimum contrast value of .35 recommended in that document. Because hardware platforms have different color maps, video boards, and monitors, developers may encounter color variations that diverge from the appearance intended when the color sets listed in table D-1 were developed.

Style Manager provides the ability to change application colors dynamically if the application is a Motif 1.1 or 1.2 client. Clients written with other toolkits cannot change color dynamically; color changes take effect when the client is restarted. The easiest way to use the dynamic colors provided by Style Manager is to remove any application color resources for background and foreground color. If the application currently specifies colors or is not in Motif, it is to use the colors indicated below. Otherwise, the application should not set colors and instead accept the defaults from the X Resource Manager.

Table D-1. Color names and RGB values for color palettes in the DII configuration.

<u>Color Set ID</u>	<u>Camouflage (W)</u>	<u>Charcoal (W)</u>	<u>CDE Default (B)</u>	<u>Northern Sky (W)</u>	<u>Sea Foam (B)</u>
1	172, 190, 180	135, 180, 176	237, 168, 112	164, 117, 145	170, 203, 219
2	110, 125, 118	118, 114, 121	153, 153, 153	27, 93, 108	167, 168, 167
3	144, 123, 123	105, 99, 99	137, 152, 170	12, 90, 135	125, 183, 187
4	130, 130, 155	137, 109, 109	104, 111, 130	0, 87, 122	151, 176, 178
5	142, 142, 119	130, 133, 133	198, 178, 168	65, 82, 92	175, 191, 186
6	127, 108, 108	99, 111, 109	73, 146, 167	75, 123, 130	197, 175, 164
7	142, 142, 133	145, 145, 145	183, 135, 141	39, 112, 139	152, 170, 165
8	78, 107, 101	175, 150, 150	147, 171, 191	61, 64, 124	200, 173, 160
	<u>Gray75 (B)</u>	<u>SlateGray (W)</u>	<u>SteelBlue (W)</u>	<u>MistyRose2 (B)</u>	
1	DarkSlateGray 47, 79, 79	Gray90 229, 229, 229	SlateGray2 185, 211, 238	DarkSlateBlue 72, 61, 139	
2	Gray75 191, 191, 191	SlateGray 112, 128, 144	SteelBlue 70, 130, 180	MistyRose2 238, 213, 211	
3	Gray60 153, 153, 153	Gray60 153, 153, 153	Gray60 153, 153, 153	Gray60 153, 153, 153	
4	Gray80 204, 204, 204	DarkSlateGray 47, 79, 79	SteelBlue4 54, 100, 139	Bisque 255, 228, 196	
5	Gray75 191, 191, 191	SlateGray 112, 128, 144	SteelBlue 70, 130, 180	MistyRose2 238, 213, 211	
6	Gray75 191, 191, 191	SlateGray 112, 128, 144	SteelBlue 70, 130, 180	MistyRose2 238, 213, 211	
7	Gray40 102, 102, 102	Gray40 102, 102, 102	Gray40 102, 102, 102	Gray40 102, 102, 102	
8	Gray40 102, 102, 102	Gray35 89, 89, 89	SteelBlue4 54, 100, 139	LightSkyBlue4 96, 123, 139	

The following backdrops are to be available in the DII configuration of CDE: Background, Concave, Convex, Foreground, No Backdrop, Paver, Sky Dark, and Sky Light.

D.3 FONT SETS

Applications in CDE or a previous version of Motif are to use the default CDE font aliases for the Hewlett-Packard and Sun platforms listed in appendix E. Style Manager provides the ability to change font size dynamically for those applications using CDE Motif; Style Manager can also be used to modify font size in non-CDE applications but users will have to restart the application for the change to take effect.

D.4 MOTIF RESOURCES

D.4.1 Resources for CDE and OSF Motif

The resource settings presented here focus on the set of widgets addressed in this style guide and include recommendations provided by Kobara in Visual Design with OSF/Motif. The color set is the one identified as the DII default in the CDE implementation. Unless otherwise indicated, the default setting is assumed for resources related to shadow thickness, highlight thickness, traversal, highlight color, select color, arm color, trough color, top shadow color, bottom shadow color, margin height, and margin width.

CascadeButton

XmNbackground:	Dynamic (DII default is Gray75)
XmNforeground:	Dynamic (DII default is Black)
XmNmappingDelay:	Default (180)
XmNmarginHeight:	Default (2) (per Kobara)
XmNmarginWidth:	8 in a menu bar (per Kobara)

CommandBox

XmNbackground:	Dynamic (DII default is Gray75)
XmNforeground:	Dynamic (DII default is Black)

FileSelectionBox

XmNbackground:	Dynamic (DII default is Gray75)
XmNforeground:	Dynamic (DII default is Black)
XmNminimizeButtons:	Default (False)

Frame

XmNbackground:	Dynamic (DII default is Gray75)
XmNmarginHeight:	Not 0 (per Kobara)
XmNmarginWidth:	Not 0 (per Kobara)
XmNshadowThickness:	2 for Shadow In & Shadow Out frames, 1 for Etched In & Etched Out frames (per Kobara)
XmNshadowType:	XmSHADOW_ETCHED_IN

Label

XmNalignment:	XmALIGNMENT_BEGINNING for vertically stacked labels & labels with widgets to their left;
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XmNbackground:	XmALIGNMENT_END for labels with widgets to their right; otherwise XmALIGNMENT_CENTER (per Kobara)
XmNforeground:	Dynamic (DII default is Gray75)
XmNmarginHeight:	Dynamic (DII default is Black)
XmNmarginWidth:	6 (per Kobara)
	Default (2) (per Kobara)

List

XmNbackground:	Dynamic (DII default is Gray80)
XmNforeground:	Dynamic (DII default is Black)
XmNlistMarginHeight:	2 (per Kobara)
XmNlistMarginWidth:	2 (per Kobara)
XmNlistSizePolicy:	XmCONSTANT (per Kobara)
XmNlistSpacing:	Default (0)
XmNscrollBarDisplayPolicy:	XmSTATIC (per Kobara)

MessageBox

XmNbackground:	Dynamic (DII default is Gray75)
XmNforeground:	Dynamic (DII default is Black)
XmNmessageAlignment:	Default (XmALIGNMENT_BEGINNING)
XmNminimizeButtons:	Default (False)

PanedWindow

XmNbackground:	Dynamic (DII default is Gray75)
XmNsashHeight:	6 (per Kobara)
XmNsashIndent:	Equal to the value by which vertical scroll bars are offset from the right edge of the paned window; -4 if no scroll bars are used (per Kobara)
XmNsashWidth:	Equal to the width of the scroll bars in the application; 12 if no scroll bars are used (per Kobara)
XmNspacing:	Default (8) (per Kobara)

PushButton

XmNalignment:	XmALIGNMENT_CENTER in a work area; XmALIGNMENT_LEFT in a menu
XmNbackground:	Dynamic (DII default is Gray75)
XmNfillOnArm:	True in a work area; False in a menu
XmNforeground:	Dynamic (DII default is Black)
XmNmarginHeight:	Default (2) (per Kobara)
XmNmarginWidth:	8 (per Kobara)

RowColumn

XmNadjustLast:	False (per Kobara)
XmNentryAlignment:	XmALIGNMENT_CENTER in a menu bar; XmALIGNMENT_BEGINNING in a menu
XmNentryBorder:	2 in a menu bar; 0 in a menu (per Kobara)
XmNorientation:	XmHORIZONTAL in a menu bar; XmVERTICAL in

XmNspacing: a menu
0 in a menu bar & menu (per Kobara)

Scale

XmNbackground: Dynamic (DII default is Gray75)
XmNforeground: Dynamic (DII default is Black)
XmNshowValue: True

ScrollBar

XmNbackground: Same as parent background color
XmNinitialDelay: Default (250 ms)
XmNrepeatDelay: Default (50 ms)
XmNscrollBarHeight: 16 for horizontal scrollbars (per Kobara)
XmNscrollBarWidth: 16 for vertical scrollbars (per Kobara)
XmNshowArrows: Default (True)

ScrolledWindow

XmNscrollBarDisplayPolicy: XmSTATIC (per Kobara)
XmNscrollBarPlacement: XmBOTTOM_RIGHT (per Kobara)
XmNscrolledWindowMarginHeight: Default (0) for scrolled list; 2 for scrolled text (per Kobara)
XmNscrolledWindowMarginWidth: Default (0) for scrolled list; 2 for scrolled text (per Kobara)
XmNspacing: Default (4) (per Kobara)

SelectionBox

XmNbackground: Dynamic (DII default is Gray75)
XmNforeground: Dynamic (DII default is Black)
XmNminimizeButtons: Default (False)

Separator

XmNbackground: Dynamic (DII default is Gray75)
XmNmargin: Default (0) (per Kobara)
XmNseparatorType: XmSHADOW_ETCHED_IN (per Kobara)

Text (Editable)

XmNautoShowCursorPosition: Default (True)
XmNbackground: Dynamic (DII default is Gray80)
XmNblinkRate: Default (500 ms -- equals 2 Hz)
XmNcursorPositionVisible: Default (True)
XmNeditable: Default (True)
XmNforeground: Dynamic (DII default is Black)
XmNwordWrap: True (per Kobara)

Text (Noneditable)

XmNautoShowCursorPosition: False
XmNbackground: Dynamic (DII default is Gray75)

XmNblinkRate:	0
XmNcursorPositionVisible:	False
XmNeditable:	False
XmNforeground:	Dynamic (DII default is Black)
XmNtraversalOn:	False

TextField (Editable)

XmNbackground:	Dynamic (DII default is Gray80)
XmNblinkRate:	Default (500)
XmNcursorPositionVisible:	Default (True)
XmNeditable:	Default (True)
XmNforeground:	Dynamic (DII default is Black)
XmNmarginHeight:	2 (per Kobara)
XmNmarginWidth:	Default (5)

TextField (Noneditable)

XmNbackground:	Dynamic (DII default is Gray75)
XmNblinkRate:	0
XmNcursorPositionVisible:	False
XmNeditable:	False
XmNforeground:	Dynamic (DII default is Black)
XmNhighlightThickness:	0
XmNmarginHeight:	2 (per Kobara)
XmNmarginWidth:	Default (5)
XmNtraversalOn:	False

ToggleButton

XmNbackground:	Dynamic (DII default is Gray75)
XmNfillOnSelect:	Default (True)
XmNforeground:	Dynamic (DII default is Black)
XmNindicatorOn:	Default (True)
XmNmarginHeight:	Default (2) (per Kobara)
XmNmarginWidth:	Default (2) (per Kobara)
XmNspacing:	Default (4) (per Kobara)
XmNvisibleWhenOff:	True in a work area & a menu

D.4.2 CDE-Specific Resources or Settings

Shadow thickness: CDE Motif defines a default shadow thickness of one pixel for components in application windows such as button shadows and focus highlight. Motif 1.2 applications use this resource value; other applications may not obtain this resource value and so may have a slightly different appearance than applications using CDE Motif or Motif 1.2.

CDE-specific widgets. The TED documentation provides the following recommendations concerning CDE-specific Motif resources:

FileSelectionBox

XmN.fullPathMode:	False
XmN.Dirtextfield:	“Enter Path Name or Folder Name.”
XmN.Filtertextfield:	“Filter”

XmN.Dirlist: "Folder"
 XmN.Contentlist: "Files"
 XmN.Filetext field: "Enter File Name:"

The TED documentation recommends using the default values for resources related to SpinBox, ComboBox, MenuButton, and Editor.

D.5 APPLICATION ICONS

CDE levies several requirements with respect to the design of the icons in the application. First, because the desktop runs in both color and monochrome modes, icons need to be created in two formats: XPM for color and XBM for monochrome. Second, because the desktop accommodates low resolution (640 x 480 pixels), medium resolution (800 x 600 pixels), and high resolution (mega-pixel) displays, icons need to be created in three sizes: 16 x 16 pixels, 32 x 32 pixels, and 48 x 48 pixels. Table D-2 lists the minimum required icon set for the application.

Table D-2. Minimum required icon set.

Type of Icon	Color 16x16	Color 32x32	Color 48x48	Mono 16x16	Mono 32x32	Mono 48x48
Application Icon	Required	Required	Required	Required	Required	Required
Document or File Icon	Required	Required		Required	Required	
Application Container Icon	Required	Required		Required	Required	
Minimized Windows			Required			Required

Icon names are to be no more than seven characters and include two suffixes, one for size and one for format, in the form:

iconname.size.format

Size is a single letter indicating the standard size of the icon: l for large (48 x 48 pixels), m for medium (32 x 32 pixels), s for small (24 x 24 pixels), and t for tiny (16 x 16 pixels). (Icons that are 24 x 24 are used for internal application graphics (e.g., in toolbars) and are not part of the standard set of desktop icons.) Format is pm for X pixmaps (the color icon format) or bm for X bitmaps (the monochrome icon format).

The Icon Editor in CDE is used to create desktop icons. This editor provides a palette of eight static grays, eight static colors, five dynamic colors (e.g., foreground, background), and a transparent "color" that allows the background to show through. The application uses this default palette and design icons primarily in grays, with other colors used sparingly. When designing the icon image, 16 x 16 and 32 x 32 icons are left-aligned within the bounding box for the image, with any empty bits to the right, and 48 x 48 icons are centered in the bounding box.

D.6 NOTES ON MOTIF IMPLEMENTATION

Developer Notes on Motif implementation will be provided in future versions of this document.

D.7 NOTES ON WINDOWS IMPLEMENTATION

Fonts. Segments shall use TrueType fonts to take advantage of the increased performance, flexibility, and WYSIWYG screen-to-printer characteristics. Custom application-specific fonts shall be avoided in favor of using industry standard fonts wherever possible. (from the DII COE Integration and Runtime Environment Specification)

Additional Developer Notes on Windows implementation will be provided in future versions of this document.